

## PATENT ABSTRACTS OF JAPAN

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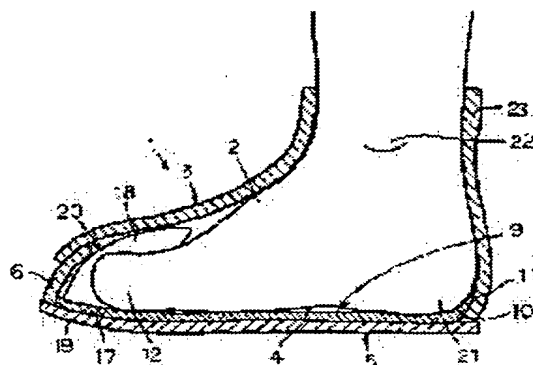
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## (54) SHOES FOR INFANT AND INSOLE THEREFOR

## (57)Abstract:

**PROBLEM TO BE SOLVED:** To provide shoes for an infant, which can make his feet move as if they grip the ground during walking and promote the healthy growth of an infant's feet.

**SOLUTION:** An insole 9 whose back end part 10 only is fixed on a shoe upper member 3 is arranged on a sole member 5. A partition wall 18 to be positioned between the first toe 12 and the second toe is provided in a standing manner for a front end part 17 of the insole 9. A space 20, which is wide enough for each toe of an infant's foot to freely move, is maintained by the partition wall 18 in the condition prescribed between a front end part 6 of the shoe upper member 3 and a front end part 19 of the sole member 5.



## LEGAL STATUS

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CLAIMS

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[Claim(s)]

[Claim 1] It has a sole member which is the shoes for infants for being worn by infants' leg, and receives the reverse side of a wrap upper member and a leg for a shell of a leg. On said sole member An insole is arranged and said insole is made into the condition that only the back end section was fixed to said upper member and/or a sole member. In the front end section of said insole It is prepared so that a bridgewall which should be located between a first digit of a leg and a second digit may start. With said bridgewall It is maintained by the condition that space of a size which each finger of a leg can move was specified between the front end section of said upper member, and the front end section of said sole member. Further said upper member They are the shoes for infants with which have a opening whose disconnection is enabled except for the front end section, and it was made to be closed by conclusion means with said removable opening.

[Claim 2] Said upper members are the shoes [ equipped with the ankle protection section prolonged even on infants' malleolus ] for infants according to claim 1.

[Claim 3] Said conclusion means are shoes for infants according to claim 2 are [ shoes ] in a condition of having stuck said upper member on a shell and an ankle of a leg of infants, and it is made to have said opening closed.

[Claim 4] They are the shoes for infants according to claim 1 to 3 with which the front end section of said insole engages with the front end section of said upper member when it is going to pull out said insole in the condition that said upper member was opened wide.

[Claim 5] Said bridgewalls are shoes for infants according to claim 1 to 4 which have [ the thickness is comparatively thin and / above a first digit and a second digit ] a cross-section configuration to which the thickness becomes comparatively thick in a portion located between a first digit and a second digit.

[Claim 6] Crosswise sizes in a part for anterior part in which said bridgewall of said insole is located are shoes for infants according to claim 1 to 5 made larger than a crosswise size of a point portion of a leg placed on the portion concerned.

[Claim 7] It is an insole for using it in the condition of having been arranged on a sole member of shoes for infants. In the front end section When it is prepared so that a bridgewall which should be located between a first digit of a leg and a second digit may start, and arranged on a sole member of shoes for infants, An insole for shoes for infants maintained by the condition that space of a size which each finger of a leg can move was prescribed by said bridgewall between the front end section of an upper member of shoes, and the front end section of a sole member.

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DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[The technical field to which invention belongs] This invention relates to the insole for the shoes for infants improved so that healthy growth of infants' leg might be promoted especially, and the shoes for infants about the insole for the shoes for infants, and the shoes for infants.

[0002]

[Description of the Prior Art] Conventionally, the shoes for infants of various designs are marketed. Although such shoes for infants are used [ from ] when a suckling begins to walk, the purpose of use is mainly for protection of a leg.

[0003]

[Problem(s) to be Solved by the Invention] It is said that growth of the leg in milk infancy continues until it becomes 6 years old or about 7 years old from the 1 years-old order along which beginning walks. It is important to grow up a leg in the healthy condition in the infancy of low age especially comparatively.

[0004] There is formation of the arch of foot as typical expression of healthy growth of such a leg. The arch of foot demonstrates the impact-absorbing effect at the time of a walk, and plays the important role of keeping a brain through the backbone. And for formation of the arch of foot, it is made important to walk making each finger of a leg exercise so that the ground may be held with foot. Such a walk condition is more easily realized, when infants walk with bare feet.

[0005] On the other hand, for protection of a leg, shoes are required in spite of it. However, when infants wear shoes, a motion of each finger of a leg is checked, it may become difficult to make a leg exercise so that the ground may be held, and healthy growth of a leg may be checked as a result.

[0006] Then, the purpose of this invention is offering the insole for the shoes for infants improved so that healthy growth of infants' leg might be promoted, and the shoes for infants.

[0007] Other purposes of this invention are offering the shoes for infants with easy making infants' leg wear or making it remove.

[0008]

[Means for Solving the Problem] This invention is first turned to shoes for being worn by infants' leg. This shoes for infants are equipped with a sole member which receives the reverse side of a wrap upper member and a leg for a shell of a leg like the usual shoes.

[0009] In order to solve a technical technical problem mentioned above, in this invention, an insole is arranged on a sole member and this insole is made into the condition that only that back end section was fixed by an upper member and/or sole member.

[0010] Moreover, it is prepared so that a bridgewall which should be located between a first digit of a leg and a second digit may start in the front end section of an insole, and space of a size which each finger of a leg can move with this bridgewall is maintained by the condition of having been specified between the front end section of an upper member, and the front end section of a sole member.

[0011] Furthermore, an upper member has a opening whose disconnection is enabled except for that front end section, and it is made to be closed by conclusion means with this removable

opening.

[0012] This invention is turned also to an insole for using it in the condition of having been arranged on a sole member of shoes for infants again. When it is prepared so that a bridgewall which should be located between a first digit of a leg and a second digit may start in the front end section of this insole, and an insole has been arranged on a sole member of shoes for infants, space of a size which each finger of a leg can move is maintained with an above-mentioned bridgewall by the condition of being specified between the front end section of an upper member of shoes, and the front end section of a sole member.

[0013]

[Effect of the Invention] Thus, since a bridgewall is located between the first digit of infants' leg, and a second digit according to the shoes for infants or the insole concerning this invention While it becomes easy to move a first digit and other four fingers to according to, respectively It is prevented that a leg shifts in the direction of a tiptoe in shoes. With moreover, a bridgewall The condition of having said that a motion of each finger of a leg was restricted by the upper member, for example can be made hard to produce from being maintained by the condition that the space of a size which each finger of a leg can move was specified between the front end section of an upper member, and the front end section of a sole member.

[0014] Since it is such, when infants walk, the effect which it becomes easy to move so that the ground may be held with foot, consequently promotes healthy growth of a leg called formation of the proper arch of foot can be expected. Therefore, for the infants of the growth period when it is especially important to protect a brain from an impact, a deeper meaning is by demonstrating the effect by this invention to form the arch of foot proper, consequently perform an impact-absorbing operation at the time of a walk.

[0015] According to the shoes for infants concerning this invention, moreover, an upper member While having the opening whose disconnection is enabled except for the front end section, an insole Since it considers as the condition that only that back end section was fixed, infants' leg can be made to be able to wear this shoes for infants, where a bridgewall is located between the first digit of infants' leg, and a second digit, or it can perform easily that a guardian makes reverse take off the shoes for infants.

[0016] That is, what is necessary is to locate a bridgewall between the first digit of infants' leg, and a second digit, to guide infants' leg into shoes from the opening of an upper member, and just to close this opening with a suitable conclusion means finally as it is, considering as the condition of having opened the opening of an upper member wide and having raised the front end section of an insole, in making the shoes for infants concerning this invention wear. On the contrary, what is necessary is just to pull out infants' leg from this shoes for infants, after dispelling a conclusion means and opening the opening of an upper member wide, in removing the shoes for infants concerning this invention.

[0017] While being able to protect infants' ankle, it can avoid taking off this shoes for infants carelessly literally in the shoes for infants concerning this invention, if the upper member is equipped with the ankle protection section prolonged even on infants' malleolus.

[0018] As mentioned above, when the upper member is equipped with the ankle protection section, where an upper member is stuck on the shell and ankle of a leg of infants, a conclusion means Without checking a motion of each finger of a leg, if it enables it to close a opening, it can prevent that the heel of a leg moves up and down in this shoes, or a leg shifts to a tiptoe side, and the sense of togetherness of a leg and shoes can be raised.

[0019] Moreover, in the condition that the upper member was opened wide, if the front end section of an insole is constituted so that it may engage with the front end section of an upper member when it is going to pull out an insole, the front end section of an insole can prevent coming from an upper member outside completely by this engagement. A leg can be made to separate from an insole quickly only by pulling apart shoes from infants' leg by this, when removing shoes while becoming possible to guide a leg smoothly into shoes after locating a bridgewall between the first digit of infants' leg, and a second digit when making this shoes for infants wear.

[0020] Moreover, it sets about the cross-section configuration of a bridgewall into the portion

located between a first digit and a second digit. If the thickness is comparatively thin and you are trying for the thickness to become comparatively thick [ above a first digit and a second digit ], since a bridgewall can be familiarized more with fitness to a first digit and a second digit While being able to reduce the sense of incongruity to a bridgewall, induction for locating a bridgewall between a first digit and a second digit can be performed smoothly. Moreover, although a guardian performs inserting a bridgewall between a first digit and a second digit, being usually one hand about a bridgewall, and having infants' leg by another hand on the occasion of such induction, it will become easy to pinch this, if the upper limit section of a bridgewall is thickened as mentioned above when it has a bridgewall single hand.

[0021] Moreover, if the crosswise size in a part for the anterior part in which the bridgewall of an insole is located is made larger than the crosswise size of the point portion of the leg placed on the portion concerned, higher flexibility can be given to a motion of each finger of a leg which was mentioned above.

[0022]

[Embodiment of the Invention] Drawing 1 thru/or drawing 5 are for explaining the shoes 1 for infants by 1 operation gestalt of this invention.

[0023] For example, the shoes 1 for infants are equipped with the sole member 5 which receives the reverse side 4 of the wrap upper member 3 and a leg for the shell 2 of infants' leg as everyone knows as well shown in drawing 1 and drawing 2 .

[0024] Moreover, as shown in drawing 4 , the upper member 3 has the opening 7 whose disconnection is enabled except for the front end section 6. This opening 7 is formed more greatly than the usual shoes. He is trying to be closed with the conclusion means 8 with this removable opening 7, for example, a field fastener.

[0025] Moreover, as shown, for example in drawing 2 thru/or drawing 5 , an insole 9 is arranged on the sole member 5. This insole 9 is made into the condition that only that back end section 10 was fixed to the upper member 3 and/or the sole member 5. With the operation gestalt of illustration, in order to make it a level difference not arise as much as possible with an insole 9, the closing-in portion 11 prolonged along the side of the upper member 3 is formed in that back end section 10, for example, an insole 9 is fixed to the upper member 3 in this closing-in portion 11. Adhesion or sewing attachment is applied to this immobilization.

[0026] The first digit 12, the second digit 13, the third finger 14, the fourth finger 15, and the fifth finger 16 of a leg of infants are illustrated by drawing 3 . It is prepared in the front end section 17 of an insole 9 so that the bridgewall 18 which should be located between the first digit 12 of a leg and a second digit 13 may start.

[0027] When it has the longer size in the direction of a tiptoe more highly than a first digit 12 and this bridgewall 18 is located between the front end section 6 of the upper member 3, and the front end section 19 of the sole member 5 as the bridgewall 18 is well shown in drawing 2 , With a bridgewall 18, the space 20 of a size which each fingers 12-16 of a leg can move is maintained by the condition of having been specified between the front end section 6 of the upper member 3, and the front end section 19 of the sole member 5.

[0028] Moreover, in the portion located between a first digit 12 and a second digit 13, the thickness of a bridgewall 18 is comparatively thin, and it has a cross-section configuration to which the thickness becomes comparatively thick [ above a first digit 12 and a second digit 13 ] as well shown in drawing 3 . While a bridgewall 18 can give good concordance to a first digit 12 and a second digit 13 and can reduce sense of incongruity by this, it can make it possible to perform smoothly induction for making it locate a bridgewall 18 between a first digit 12 and a second digit 13. Moreover, the effect that it becomes easy for a guardian to pinch the upper limit section of a bridgewall 18 on the occasion of such induction is also expectable.

[0029] Moreover, in the portion of the heel 21 infants' leg, although chosen as a size to which the upper member 3 suits a leg as much as possible, in the point portion of a leg, it is desirable [ the crosswise size of the space 20 which the front end section 6 of the upper member 3 specifies ] in the condition of having worn this shoes 1 for infants, to be made larger than the crosswise size of the point portion of a leg. And if it is in an insole 9, as shown in drawing 3 , it is desirable [ the crosswise size W1 in a part for the anterior part in which a bridgewall 18 is

located ] to be made larger than the crosswise size W2 of the point portion of the leg placed on the portion concerned. By this, flexibility to a motion of each fingers 12-16 of infants' leg can be made higher.

[0030] Moreover, the upper member 3 is equipped with the ankle protection section 23 prolonged even on infants' malleolus 22 as well shown in drawing 2 . Moreover, the field fastener 8 (refer to drawing 4 ) mentioned above is in the condition of having stuck the upper member 3 on the shell 2 and ankle of a leg of infants, and it is made to have the opening 7 closed.

[0031] Considering as the condition of having protected infants' ankle and having held the ankle by the configuration which was mentioned above, in this shoes 1, it can prevent that a heel 21 moves up and down or a leg shifts in the direction of a tiptoe, and the sense of togetherness of infants' leg and shoes 1 can be raised further.

[0032] Moreover, when it is going to pull out an insole 9 in the condition that the upper member 3 was opened wide as well shown in drawing 5 , the front end section 17 of an insole 9 is constituted so that it may engage with the front end section 6 of the upper member 3. It is prevented by this that the front end section 17 of an insole 9 comes from the opening 7 of the upper member 3 outside completely.

[0033] In such shoes 1 for infants, the upper member 3 can consist of the quality of the materials similar to as everyone knows comparatively soft leather, thick cloth, or these.

[0034] Moreover, the sole member 5 can be constituted from the quality of the material similar to rubber or this as everyone knows, and preferably, the slot for a skid etc. is given to the base and it is considered as the configuration which is comparatively sticky as a whole.

[0035] Moreover, it is desirable comparatively to be easy to bend and to have impact-absorption nature, permeability, and sweat absorvency as the quality of the material of an insole 9, and it is still more desirable that the function of the skid of the degree which it is between infants' legs is demonstrated.

[0036] Moreover, about the quality of the material of a bridgewall 18, it is softer than the quality of the material of the above-mentioned insole 9, and it is desirable to have moderate softness which deforms to some extent by contact of a first digit 12 and a second digit 13.

[0037] Next, operation of the shoes 1 for infants, an operation, etc. which have a configuration which was mentioned above are explained.

[0038] First, in order to make infants' leg wear this shoes 1 for infants, as shown in drawing 4 , the opening 7 of the upper member 3 is opened wide greatly.

[0039] Subsequently, the upper limit section of a bridgewall 18 is picked up between its fingers, for example, and as shown in drawing 5 , the front end section 17 of an insole 9 is raised from the sole member 5. At this time, when the front end section 17 of an insole 9 engages with the front end section 6 of the upper member 3, the cash drawer beyond it is prevented.

[0040] In the condition which showed in above-mentioned drawing 5 , a bridgewall 18 is inserted between the first digit 12 of infants' leg, and a second digit 13, and while it has been in the condition, infants' leg is stored into the upper member 3 so that an insole 9 may be returned on the sole member 5.

[0041] Subsequently, the field fastener 8 is combined so that the opening 7 of the upper member 3 may be closed. At this time, the joint location of the field fastener 8 is chosen so that the upper member 3 may be stuck on the shell 2 and ankle of a leg of infants.

[0042] In the wear condition acquired as mentioned above, since a bridgewall 18 is located between the first digit 12 of infants' leg, and a second digit 13 While it becomes easy to move a first digit 12 and other four fingers 13-16 to according to, respectively It is prevented that a leg shifts in the direction of a tiptoe in shoes 1. With moreover, the bridgewall 18 The condition of having said that a motion of each fingers 12-16 of a leg was restricted by the upper member 3, for example can be made hard to produce from being maintained by the condition that the space 20 of a size which each fingers 12-16 of a leg can move was specified between the front end section 6 of the upper member 3, and the front end section 19 of the sole member 5.

[0043] Therefore, infants can perform easily movement which holds the ground with this foot, when each fingers 12-16 of that leg can be moved comparatively freely in the space 20 to which it was specified between the front end section 6 of the upper member 3, and the front end

section 19 of the sole member 5, therefore are walked.

[0044] Moreover, in such a walk condition, since the bridgewall 18 is located between a first digit 12 and a second digit 13 while the upper member 3 is in the condition of having stuck to the shell 2 and ankle of a leg of infants, it can prevent that a leg shifts to a tiptoe side or a heel 21 moves up and down in shoes 1.

[0045] On the other hand, in a wear condition which was mentioned above, when removing shoes 1, first, association by the field fastener 8 is solved and the opening 7 of the upper member 3 is opened wide. And what is necessary is just to make it pull apart infants' leg from shoes 1. Since the front end section 17 of an insole 9 engages with the front end section 6 of the upper member 3 at this time, the front end section 17 of an insole 9 is not pulled out completely on the outside of the upper member 3, therefore can make infants' leg separate from an insole 9 quickly.

[0046] Moreover, in making infants wear this shoes 1 for infants again, it is desirable to change the front end section 17 of an insole 9 into the condition that you made it located in the upper member 3. Therefore, the front end section 17 of an insole 9 has the meaning as a preparation for making it not pulled out outside completely to acquire the following wear condition quickly from the upper member 3 as mentioned above.

[0047] Drawing 6 is drawing equivalent to drawing 1 showing the shoes 31 for infants by other operation gestalten of this invention.

[0048] The infant shoes 31 shown in drawing 6 are equipped with the upper member 32 and the sole member 33 like the shoes 1 for infants mentioned above. This operation gestalt is characteristic in the upper member 32.

[0049] That is, the upper member 32 has the opening 35 whose disconnection is enabled except for that front end section 34, and while making it closed with the belts 36, 37, and 38 as a conclusion means (3 [ for example, ]) with this removable opening 35, a ligula 39 is located along with a opening 35.

[0050] It is combined with the field fastener with which the field fastener was attached, for example and these field fastener was attached in the surface of the upper member 32 although not illustrated in each rear face of belts 36-38.

[0051] Moreover, a ligula 39 is faced it being attached in the upper member 32 only in the lower limit section, and opening a opening 35 greatly, and it is made not to serve as hindrance.

[0052] In addition, also in the shoes 31 for infants shown in drawing 6 although it was needless to say, although not illustrated, an insole equipped with a bridgewall is arranged on the sole member 33 like the case of the operation gestalt mentioned above.

[0053] As mentioned above, the insole in which the bridgewall equipped with it there although this invention was explained about the operation gestalt concerning the shoes for infants was formed is made dismountable from the main part portion of the shoes for infants, and is good also as exchangeable in such an insole. Moreover, only the insole in which the bridgewall was formed is offered, the existing shoes for infants are equipped with this, and you may make it demonstrate the effect by this invention.

[0054] Moreover, the removable conclusion means for closing the opening of an upper member is not limited to the belts 36-38 furnished with the field fastener 8 or a field fastener like [ in the case of the operation gestalt mentioned above ], and connecting fitting like the buckle for using a string or stopping a belt for example, may be used for it.

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[Translation done.]



## DESCRIPTION OF DRAWINGS

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### [Brief Description of the Drawings]

[Drawing 1] It is the perspective diagram showing the appearance of the shoes 1 for infants by 1 operation gestalt of this invention.

[Drawing 2] It is the drawing of longitudinal section showing the internal structure of the shoes 1 for infants shown in drawing 1 with infants' leg.

[Drawing 3] It is the front view showing the insole 9 shown in drawing 2 with infants' leg.

[Drawing 4] It is the perspective diagram showing the condition of having opened wide the opening 7 formed in the upper member 3 of the shoes 1 for infants shown in drawing 1.

[Drawing 5] It is in the open condition of the opening 7 shown in drawing 4, and is the drawing of longitudinal section of the shoes 1 for infants in which the condition of having raised the front end section 17 of an insole 9 is shown.

[Drawing 6] It is the perspective diagram showing the appearance of the shoes 31 for infants by other operation gestalten of this invention.

### [Description of Notations]

- 1 31 Shoes for infants
- 2 Shell of Leg
- 3 32 Upper member
- 4 Reverse Side of Leg
- 5 33 Sole member
- 6 34 The front end section of an upper member
- 7 35 Opening
- 8 Field Fastener (Conclusion Means)
- 9 Insole
- 10 Back End Section of Insole
- 12 First Digit
- 13 Second Digit
- 17 Front End Section of Insole
- 18 Bridgewall
- 19 Front End Section of Sole Member
- 20 Space
- 22 Malleolus
- 23 Ankle Protection Section
- 36-38 Belt (conclusion means)

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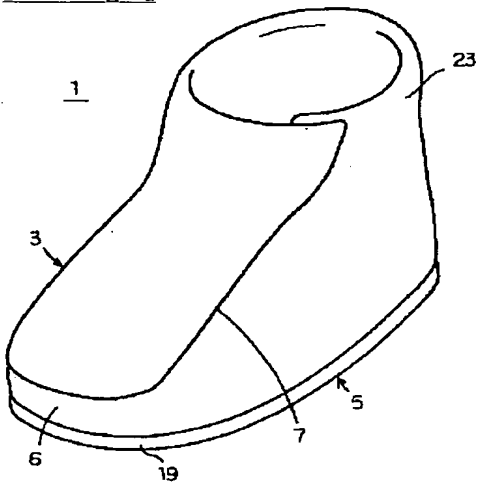
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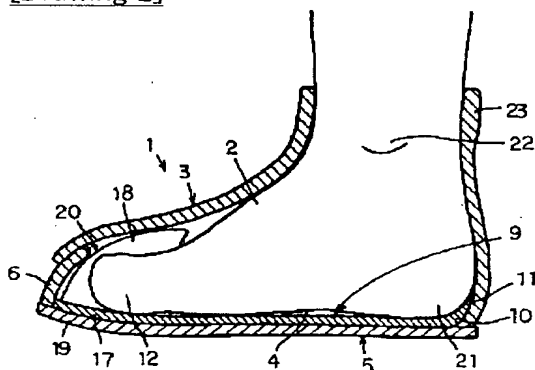
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## DRAWINGS

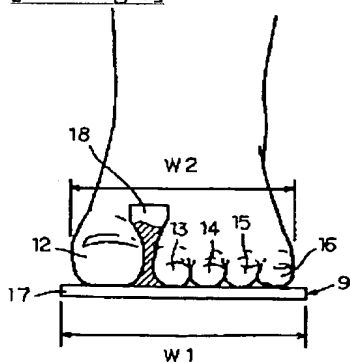
[Drawing 1]



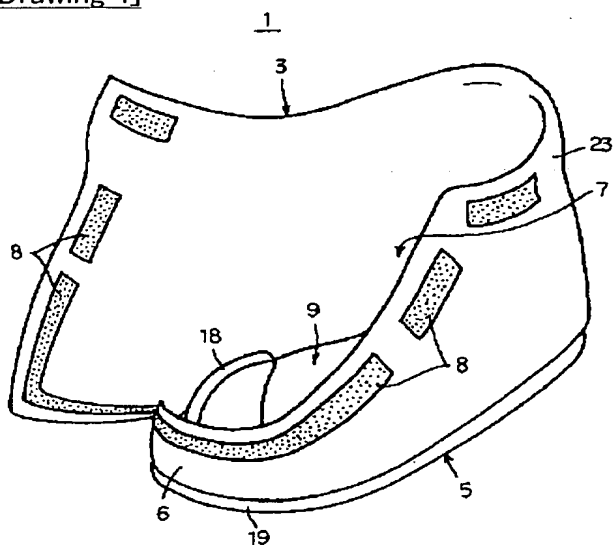
[Drawing 2]



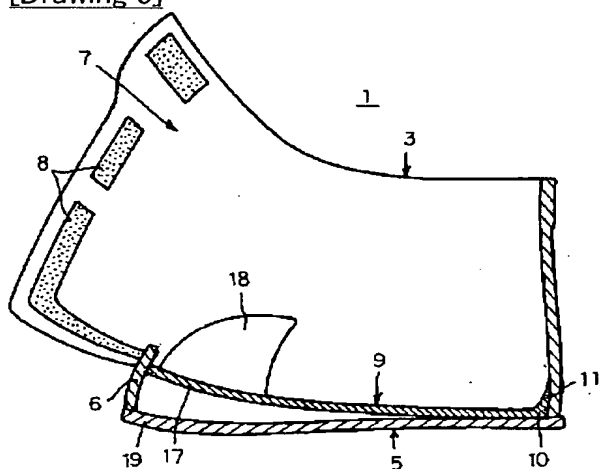
[Drawing 3]



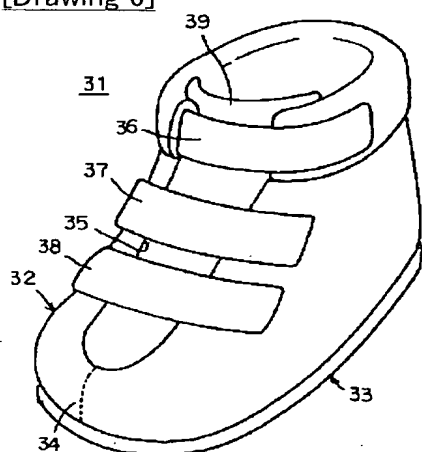
[Drawing 4]



[Drawing 5]



[Drawing 6]



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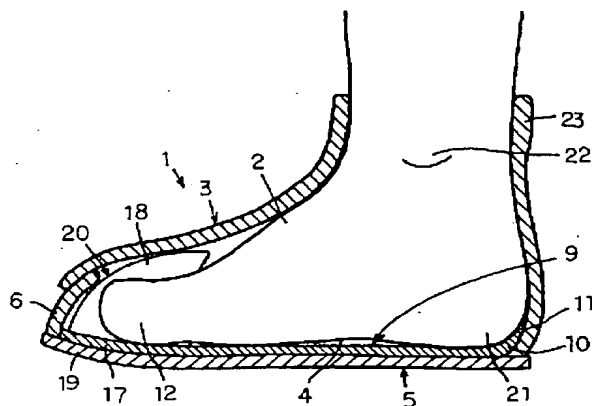
BC25 BC26 EA26 JA28

(54) 【発明の名称】 乳幼児用靴および乳幼児用靴のための中敷き

(57) 【要約】

【課題】 歩行状態において、地面をつかむように足を運動させることができ、乳幼児の足の健全な成長を促進するようにされた、乳幼児用靴を提供する。

【解決手段】 靴底部材5上に、その後端部10のみが甲被部材3に固定された中敷き9を配置する。中敷き9の前端部17には、足の第1指12と第2指との間に位置させるべき仕切り壁18が立ち上がるように設けられ、この仕切り壁18によって、足の各指が動き得る広さの空間20が、甲被部材3の前端部6と靴底部材5の前端部19との間に規定された状態に維持される。



【特許請求の範囲】

【請求項1】 乳幼児の足に着用されるための乳幼児用靴であって、

足の甲を覆う甲被部材と足の裏を受ける靴底部材とを備え、

前記靴底部材上には、中敷きが配置され、前記中敷きは、その後端部のみが前記甲被部材および／または靴底部材に固定された状態とされ、

前記中敷きの前端部には、足の第1指と第2指との間に位置させるべき仕切り壁が立ち上がるように設けられ、前記仕切り壁によって、足の各指が動き得る広さの空間が前記甲被部材の前端部と前記靴底部材の前端部との間に規定された状態に維持され、さらに、

前記甲被部材は、その前端部を除いて開放可能とする開口を有し、前記開口は、着脱可能な締結手段によって閉じられるようにされた、乳幼児用靴。

【請求項2】 前記甲被部材は、乳幼児のくるぶしの上に乗る足首保護部を備える、請求項1に記載の乳幼児用靴。

【請求項3】 前記締結手段は、前記甲被部材を乳幼児の足の甲および足首に密着させた状態で、前記開口を閉じることができるようにされている、請求項2に記載の乳幼児用靴。

【請求項4】 前記甲被部材が開放された状態において、前記中敷きを引き出そうとするとき、前記中敷きの前端部は、前記甲被部材の前端部に係合する、請求項1ないし3のいずれかに記載の乳幼児用靴。

【請求項5】 前記仕切り壁は、第1指と第2指との間に位置する部分において、その厚みが比較的薄く、かつ、第1指および第2指の上方において、その厚みが比較的厚くなるような断面形状を有する、請求項1ないし4のいずれかに記載の乳幼児用靴。

【請求項6】 前記中敷きの、前記仕切り壁が位置する前部分における幅方向寸法は、当該部分上に置かれる足の先部分の幅方向寸法より大きくされる、請求項1ないし5のいずれかに記載の乳幼児用靴。

【請求項7】 乳幼児用靴の靴底部材上に配置された状態で使用するための中敷きであって、

その前端部には、足の第1指と第2指との間に位置させるべき仕切り壁が立ち上がるように設けられ、

乳幼児用靴の靴底部材上に配置されたとき、前記仕切り壁によって、足の各指が動き得る広さの空間が靴の甲被部材の前端部と靴底部材の前端部との間に規定される状態に維持されるようにした、乳幼児用靴のための中敷き。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】この発明は、乳幼児用靴および乳幼児用靴のための中敷きに関するもので、特に、乳幼児の足の健全な成長を促進するように改良された乳幼

児用靴および乳幼児用靴のための中敷きに関するものである。

【0002】

【従来の技術】従来、種々のデザインの乳幼児用靴が市販されている。このような乳幼児用靴は、乳児が歩き始める頃から使用されるが、その使用目的は、主として、足の保護のためである。

【0003】

【発明が解決しようとする課題】乳幼児期における足の成長は、歩き始めの1歳前後から6歳または7歳程度になるまで続くと言われている。特に、比較的低年齢の乳児期において、足を健全な状態で成長させることが重要である。

【0004】このような足の健全な成長の典型的な現われとして、土踏まずの形成がある。土踏まずは、歩行時において衝撃吸収効果を発揮し、背骨を通して脳を守るといった重要な役割を果たすものである。そして、土踏まずの形成のためには、足によって地面をつかむように足の各指を運動させながら歩くことが重要であるとされている。このような歩行状態は、乳幼児が素足で歩くときに、より容易に実現される。

【0005】他方、それにも関わらず、足の保護のためには靴が必要である。しかしながら、乳幼児が靴を着用すると、足の各指の動きが阻害され、地面をつかむように足を運動させることが困難になり、結果として、足の健全な成長を阻害してしまうことがある。

【0006】そこで、この発明の目的は、乳幼児の足の健全な成長を促進するように改良された乳幼児用靴および乳幼児用靴のための中敷きを提供しようとするところにある。

【0007】この発明の他の目的は、乳幼児の足に履かせたり脱がせたりすることが容易な乳幼児用靴を提供しようとするところである。

【0008】

【課題を解決するための手段】この発明は、まず、乳幼児の足に着用されるための靴に向けられる。この乳幼児用靴は、通常の靴と同様、足の甲を覆う甲被部材と足の裏を受ける靴底部材とを備えている。

【0009】上述した技術的課題を解決するため、この発明では、靴底部材上に、中敷きが配置され、この中敷きは、その後端部のみが甲被部材および／または靴底部材に固定された状態とされる。

【0010】また、中敷きの前端部には、足の第1指と第2指との間に位置させるべき仕切り壁が立ち上がるように設けられ、この仕切り壁によって足の各指が動き得る広さの空間が甲被部材の前端部と靴底部材の前端部との間に規定された状態に維持される。

【0011】さらに、甲被部材は、その前端部を除いて開放可能とする開口を有し、この開口は、着脱可能な締結手段によって閉じられるようにされる。

【0012】この発明は、また、乳幼児用靴の靴底部材上に配置された状態で使用するための中敷きにも向けられる。この中敷きの前端部には、足の第1指と第2指との間に位置されるべき仕切り壁が立ち上がるように設けられ、中敷きが乳幼児用靴の靴底部材上に配置されたとき、上述の仕切り壁によって、足の各指が動き得る広さの空間が靴の甲被部材の前端部と靴底部材の前端部との間に規定される状態に維持される。

【0013】

【発明の効果】このように、この発明に係る乳幼児用靴または中敷きによれば、乳幼児の足の第1指と第2指との間に仕切り壁が位置されるので、第1指と他の4指とをそれぞれ別に動かすことが容易になるとともに、足が靴の中でつま先方向へずれることが防止され、また、仕切り壁によって、足の各指が動き得る広さの空間が甲被部材の前端部と靴底部材の前端部との間に規定された状態に維持されることから、たとえば甲被部材によって足の各指の動きが制限されるといった状態を生じにくくすることができる。

【0014】このようなことから、乳幼児が歩行するとき、足によって地面をつかむように動かすことが容易になり、その結果、適正な土踏まずの形成といった足の健全な成長を促進する効果を期待できる。したがって、脳を衝撃から守ることが特に重要である成長期の乳幼児にとっては、この発明による効果が発揮されることにより、土踏まずが適正に形成され、その結果、歩行時ににおいて衝撃吸収作用が営まれることに、より深い意義がある。

【0015】また、この発明に係る乳幼児用靴によれば、甲被部材は、その前端部を除いて開放可能とする開口を有しているとともに、中敷きは、その後端部のみが固定された状態とされているので、保護者が、乳幼児の足の第1指と第2指との間に仕切り壁を位置させた状態で、乳幼児の足にこの乳幼児用靴を履かせたり、あるいは、逆に、乳幼児用靴を脱がせたりすることを容易に行なうことができる。

【0016】すなわち、この発明に係る乳幼児用靴を履かせる場合には、甲被部材の開口を開放し、かつ中敷きの前端部を持ち上げた状態としながら、乳幼児の足の第1指と第2指との間に仕切り壁を位置させ、そのまま、乳幼児の足を甲被部材の開口から靴の中へ誘導し、最終的に、この開口を適当な締結手段によって閉じるようにすればよい。逆に、この発明に係る乳幼児用靴を脱がせる場合には、締結手段を解いて、甲被部材の開口を開放した後、乳幼児の足をこの乳幼児用靴から引き出すようにすればよい。

【0017】この発明に係る乳幼児用靴において、甲被部材が、乳幼児のくるぶしの上にまで延びる足首保護部を備えていると、文字どおり、乳幼児の足首を保護することができるとともに、この乳幼児用靴が不用意に脱げ

てしまわないようにすることができる。

【0018】上述のように、甲被部材が足首保護部を備えている場合において、締結手段が、甲被部材を乳幼児の足の甲および足首に密着させた状態で、開口を閉じることができるようにされていると、足の各指の動きを阻害することなく、この靴の中で足のかかとが上下動したり、足がつま先側へずれたりすることを防止することができ、足と靴との一体感を高めることができる。

【0019】また、甲被部材が開放された状態において、中敷きを引き出そうとすると、中敷きの前端部が、甲被部材の前端部に係合するように構成されていると、この係合によって、中敷きの前端部が甲被部材から完全に外へ出てしまうことを防止することができる。これによって、この乳幼児用靴を履かせる場合、乳幼児の足の第1指と第2指との間に仕切り壁を位置させた後、足を靴の中へ円滑に誘導することが可能になるとともに、靴を脱がせる場合においても、単に靴を乳幼児の足から引き離すだけで、中敷きから足を迅速に分離させることができる。

【0020】また、仕切り壁の断面形状に関して、第1指と第2指との間に位置する部分において、その厚みが比較的薄く、かつ、第1指および第2指の上方において、その厚みが比較的厚くなるようにされていると、仕切り壁を、第1指および第2指に対してより良好になじませることができるので、仕切り壁に対する違和感を低減することができるとともに、第1指と第2指との間に仕切り壁を位置させるための誘導を円滑に行なうことができる。また、このような誘導に際して、保護者は、通常、仕切り壁を片手で、かつ乳幼児の足をもう一方の手で持ちながら、第1指と第2指との間に仕切り壁を挿入することを行なうが、仕切り壁を片手で持つとき、仕切り壁の上端部が上述のように厚くされていると、これをつまむことが容易になる。

【0021】また、中敷きの、仕切り壁が位置する前部分における幅方向寸法が、当該部分上に置かれる足の先部分の幅方向寸法より大きくされると、前述したような足の各指の動きに対して、より高い自由度を持たせることができる。

【0022】

【発明の実施の形態】図1ないし図5は、この発明の一実施形態による乳幼児用靴1を説明するためのものである。

【0023】たとえば図1および図2によく示されているように、乳幼児用靴1は、周知のように、乳幼児の足の甲2を覆う甲被部材3と足の裏4を受ける靴底部材5とを備えている。

【0024】また、図4に示すように、甲被部材3は、その前端部6を除いて開放可能とする開口7を有している。この開口7は、通常の靴より大きく形成されている。この開口7は、着脱可能な締結手段、たとえば面フ

ファスナ8によって閉じられるようにされている。

【0025】また、たとえば図2ないし図5に示すように、靴底部材5上には、中敷き9が配置される。この中敷き9は、その後端部10のみが甲被部材3および/または靴底部材5に固定された状態とされる。図示の実施形態では、中敷き9によって段差ができるだけ生じないようにするため、その後端部10には、甲被部材3の側面に沿って延びる肉薄部分11が形成され、たとえば、この肉薄部分11において中敷き9が甲被部材3に固定される。この固定には、たとえば、接着または縫い付けが適用される。

【0026】図3には、乳幼児の足の第1指12、第2指13、第3指14、第4指15および第5指16が図示されている。中敷き9の前端部17には、足の第1指12と第2指13との間に位置させるべき仕切り壁18が立ち上がるように設けられている。

【0027】仕切り壁18は、図2によく示されているように、第1指12より高くかつつま先方向へより長い寸法を有して、この仕切り壁18が、甲被部材3の前端部6と靴底部材5の前端部19との間に位置されたとき、仕切り壁18によって、足の各指12~16が動き得る広さの空間20が甲被部材3の前端部6と靴底部材5の前端部19との間に規定された状態に維持される。

【0028】また、仕切り壁18は、図3によく示されているように、第1指12と第2指13との間に位置する部分において、その厚みが比較的薄く、かつ、第1指12および第2指13の上方において、その厚みが比較的厚くなるような断面形状を有している。これによって、仕切り壁18が、第1指12および第2指13に対して良好ななじみを与え、違和感を低減することができるとともに、仕切り壁18を第1指12と第2指13との間に位置させるようにするための誘導を円滑に行なえるようにすることができる。また、このような誘導に際して、保護者が仕切り壁18の上端部をつまむことが容易になるという効果も期待できる。

【0029】また、この乳幼児用靴1を着用した状態において、乳幼児の足のかかと21の部分においては、甲被部材3ができるだけ足に適合するような寸法に選ばれるが、足の先部分においては、甲被部材3の前端部6が規定する空間20の幅方向寸法は、足の先部分の幅方向寸法より大きくされることが好ましい。そして、中敷き9にあっては、図3に示すように、仕切り壁18が位置する前部分における幅方向寸法W1は、当該部分上に置かれる足の先部分の幅方向寸法W2より大きくされることが好ましい。これによって、乳幼児の足の各指12~16の動きに対する自由度をより高くすることができる。

【0030】また、図2によく示されているように、甲被部材3は、乳幼児のくるぶし22の上にも延びる足

首保護部23を備えている。また、前述した面ファスナ8（図4参照）は、甲被部材3を乳幼児の足の甲2および足首に密着させた状態で、開口7を閉じることができるようにされている。

【0031】上述したような構成によって、乳幼児の足首を保護し、また、足首を保持した状態としながら、この靴1の中で、かかと21が上下動したり、足がつま先方向へずれたりすることを防止することができ、さらに、乳幼児の足と靴1との一体感を高めることができる。

【0032】また、図5によく示されているように、甲被部材3が開放された状態において、中敷き9を引き出そうとすると、中敷き9の前端部17は、甲被部材3の前端部6に係合するように構成される。これによって、中敷き9の前端部17が、甲被部材3の開口7から完全に外へ出てしまうことが防止される。

【0033】このような乳幼児用靴1において、甲被部材3は、周知のように、比較的柔らかい皮革または厚手の布地あるいはこれらに類する材質から構成することができる。

【0034】また、靴底部材5は、周知のように、たとえばゴムまたはこれに類する材質から構成することができ、好ましくは、その底面に滑り止めのための溝等が付与され、全体として比較的腰のある構成とされる。

【0035】また、中敷き9の材質としては、比較的撓みやすく、衝撃吸収性、通気性および吸汗性を有していることが好ましく、さらに、乳幼児の足との間である程度の滑り止めの機能が発揮されるようにしておくことが好ましい。

【0036】また、仕切り壁18の材質については、上述の中敷き9の材質より柔らかく、第1指12および第2指13の接触により、ある程度変形するような適度な柔らかさを有していることが好ましい。

【0037】次に、上述したような構成を有する乳幼児用靴1の使用法および作用等について説明する。

【0038】まず、この乳幼児用靴1を乳幼児の足に着用させるため、図4に示すように、甲被部材3の開口7が大きく開放される。

【0039】次いで、たとえば仕切り壁18の上端部をつまみ上げるなどして、図5に示すように、中敷き9の前端部17が靴底部材5から持ち上げられる。このとき、中敷き9の前端部17は、甲被部材3の前端部6に係合することによって、それ以上の引出しが阻止される。

【0040】上述の図5に示した状態において、乳幼児の足の第1指12と第2指13との間に仕切り壁18が挿入され、その状態のまま、中敷き9を靴底部材5上に戻すように、乳幼児の足が甲被部材3の中へ収められる。

【0041】次いで、甲被部材3の開口7を閉じるよう

に、面ファスナ8が結合される。このとき、乳幼児の足の甲2および足首に甲被部材3を密着させるように、面ファスナ8の結合位置が選ばれる。

【0042】上述のようにして得られた着用状態において、乳幼児の足の第1指12と第2指13との間に仕切り壁18が位置されるので、第1指12と他の4指13～16とをそれぞれ別に動かすことが容易になるとともに、足が靴1の中でつま先方向へずれることが防止され、また、仕切り壁18によって、足の各指12～16が動き得る広さの空間20が甲被部材3の前端部6と靴底部材5の前端部19との間に規定された状態に維持されることから、たとえば甲被部材3によって足の各指12～16の動きが制限されるといった状態を生じにくくすることができる。

【0043】したがって、乳幼児は、その足の各指12～16を、甲被部材3の前端部6と靴底部材5の前端部19との間に規定された空間20内において、比較的自由に動かすことができ、したがって、歩行したとき、この足によって地面をつかむような運動を容易に行なうことができる。

【0044】また、このような歩行状態において、甲被部材3が乳幼児の足の甲2および足首に密着した状態となっており、仕切り壁18が第1指12と第2指13との間に位置していることから、足がつま先側へずれたり、あるいは、靴1の中でかかと21が上下動したりすることを防止することができる。

【0045】他方、上述したような着用状態において、靴1を脱がせる場合には、まず、面ファスナ8による結合が解かれ、甲被部材3の開口7が開放される。そして、乳幼児の足を靴1から引き離すようにすればよい。このとき、中敷き9の前端部17が、甲被部材3の前端部6に係合するため、中敷き9の前端部17が、甲被部材3の外側へ完全に引き出されることはなく、したがって、乳幼児の足を中敷き9から迅速に分離させることができる。

【0046】また、この乳幼児用靴1を乳幼児に再び着用させるにあたっては、中敷き9の前端部17を甲被部材3の中に位置させた状態にしておくことが好ましい。そのため、上述のように、中敷き9の前端部17が甲被部材3から完全には外側へ引き出されないようにすることは、次の着用状態を迅速に得るための備えとしての意義もある。

【0047】図6は、この発明の他の実施形態による乳幼児用靴31を示す、図1に相当する図である。

【0048】図6に示した乳幼児靴31は、前述した乳幼児用靴1と同様、甲被部材32と靴底部材33とを備えている。この実施形態は、甲被部材32において特徴がある。

【0049】すなわち、甲被部材32は、その前端部34を除いて開放可能とする開口35を有し、この開口3

5は、着脱可能な締結手段としてのたとえば3本のベルト36、37および38によって閉じられるようにされるとともに、開口35に沿って、舌状片39が位置される。

【0050】ベルト36～38の各裏面には、図示しないが、たとえば面ファスナが取り付けられ、これら面ファスナが甲被部材32の表面に取り付けられた面ファスナと結合される。

【0051】また、舌状片39は、その下端部においてのみ甲被部材32に取り付けられ、開口35を大きく開放するに際し、妨げとならないようにされる。

【0052】なお、言うまでもないが、図6に示した乳幼児用靴31においても、図示しないが、前述した実施形態の場合と同様、仕切り壁を備える中敷きが靴底部材33上に配置される。

【0053】以上、この発明を、乳幼児用靴に係る実施形態について説明したが、そこに備える仕切り壁を形成した中敷きは、乳幼児用靴の本体部分から取り外し可能とされ、このような中敷きを交換可能としてもよい。また、仕切り壁を形成した中敷きのみを提供し、これを既存の乳幼児用靴に装着して、この発明による効果を発揮させるようにしてもよい。

【0054】また、甲被部材の開口を閉じるための着脱可能な締結手段は、前述した実施形態の場合のように、面ファスナ8または面ファスナを取り付けたベルト36～38に限定されるものではなく、たとえば、紐を用いたり、ベルトを留めるためのバックルのような連結金具を用いてもよい。

【図面の簡単な説明】

【図1】この発明の一実施形態による乳幼児用靴1の外観を示す斜視図である。

【図2】図1に示した乳幼児用靴1の内部構造を、乳幼児の足とともに示す縦断面図である。

【図3】図2に示した中敷き9を、乳幼児の足とともに示す正面図である。

【図4】図1に示した乳幼児用靴1の甲被部材3に形成された開口7を開放した状態を示す斜視図である。

【図5】図4に示した開口7の開放状態であって、中敷き9の前端部17を持ち上げた状態を示す、乳幼児用靴1の縦断面図である。

【図6】この発明の他の実施形態による乳幼児用靴31の外観を示す斜視図である。

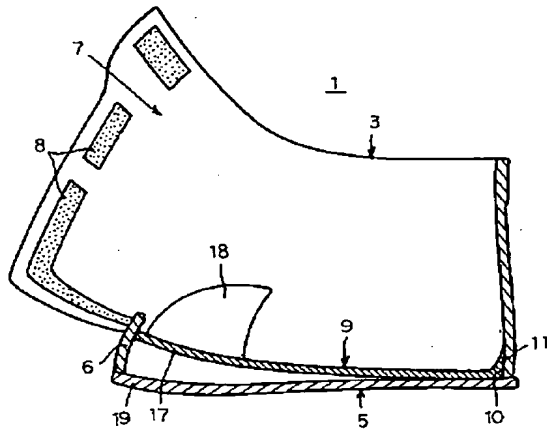
【符号の説明】

- 1, 31 乳幼児用靴
- 2 足の甲
- 3, 32 甲被部材
- 4 足の裏
- 5, 33 靴底部材
- 6, 34 甲被部材の前端部
- 7, 35 開口





【図5】



【図6】

